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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,489	06/01/2000	Hieronymus Andriessen	4832/Bisquat	4952

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EXAMINER

KRUEER, KEVIN R

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3

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Please find below and/or attached an Office communication concerning this application or proceeding.

MF-3

Office Action Summary	Application No. 09/584,489	Applicant(s) ANDRIESSEN ET AL.	
	Examiner Kevin R Kruer	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 1,2,10 and 15-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 3-9, 11, 12, and 14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☒ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Election/Restrictions

Claims 10, 13, and 15 are directed towards non-statutory subject matter.

Therefore, claims 10, 13, and 15 are not included in the restriction requirement.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1 and 2, drawn to an aqueous composition comprising a N-quaternized cellulose and metal particles, classified in class 524, subclass 29.
- II. Claims 3-9, 11, 12, and 14, drawn to a sheet or web material comprising a support and metal layer, classified in class 428, subclass 411+.
- III. Claims 16-19, drawn to a process of preparing an aqueous coating composition comprising metal particles, a reducing agent, and a N-quaternized cellulose, classified in class 527, subclass 29.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a solution to make a single-layered cast film and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit

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evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Inventions I and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product could be made by a materially different process. For example, the product could be made without the washing step. Furthermore, the product could be made as a singly aqueous solution rather than three aqueous solutions. The process could also be utilized to make a materially different product. For example, the process could be utilized to make a composition with a metal particle concentration of less than 200g/l.

Inventions II and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product could be made by a materially different process. For example, the product could be made with a single aqueous solution rather than three aqueous solutions. The product also could be made utilizing

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a solvent other than water. The process could also be utilized to make a materially different product, such as a single-layered cast film.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with A.W. Breiner on Thursday April 4, 2002 a provisional election was made with traverse to prosecute the invention of Group II, claims 3-9, 11, 12, and 14. Affirmation of this election must be made by applicant in replying to this Office action. Claims are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

Claim 12 is objected to because of the following informalities: "molybdene" should read "molybdenum". Appropriate correction is required.

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Europe on June 6, 1999. It is noted, however, that applicant has not filed a certified copy of the EPO 992018895.2 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 10, 13, and 15 are rejected under 35 U.S.C. 101 because

the claimed invention is directed to non-statutory subject matter. Claims that merely recite a use without any active, positive steps delimiting how this use is actually practiced do not contain patentable subject matter as set forth in 35 U.S.C. 101.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 3-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0875889A1 (aka Daems) in view of JP58089397A (Ricoh). Daems teaches a heat mode recording material comprising a transparent organic resin support (page 3, line 45), a subbing layer applied to said support (page 3, line 52) and a thin metal material applied thereto (page 4, line 4). The metal layer is applied via an aqueous solution comprising metal ions that are reduced to metal particles by means of a reducing agent (page 4, line 21). The aqueous solution further comprises a binder such as cellulose derivatives, gelatin, Arabic gum and polyacrylic acid (page 4, line 15). The metal is selected from a group comprising bismuth, tin, and silver (page 4, line 56). A protective element may be applied to the metal layer. Preferably the protective element comprises an adhesive layer and a transparent organic layer such as PET (page 5, lines 3+).

Daems does not teach that the binder should comprise an N-quaternized cellulose. However, Ricoh teaches a heat sensitive recording sheets that comprises a

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binder comprising an ammonium salt and CMC or methyl cellulose (abstract). Said binder improves water resistance (abstract). Therefore, it would have been obvious to one of ordinary skill in the art to utilize the binder taught in Ricoh as the binder utilized in the heat mode recording material taught in Daems in order to improve the recording material's water resistance.

2. Claims 3-9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andriessen et al. (US 6,187,508) in view of JP 58089397A (Ricoh). Andriessen teaches a heat mode recording element based on a thin metal, characterized in that it contains hypophosphorous and/or phosphorous acid (abstract). The heat mode recording material comprises a transparent substrate (col 3, line 60), a subbing layer (col 4, line 1), and a thin metal layer (col 4, line 25). The metal layer is obtained from an aqueous solution of metal ions that is reduced to metal particles by means of a reducing agent (col 4, line 45). Metal that may be utilized include bismuth, tin, and silver (col 5, line 62). In order to keep the metal particles in colloidal dispersion a protective binder is added to the aqueous solution (col 4, line 57). Such binders include CMC, polyacrylic acid, cellulose derivatives, and gelatin. A protective layer may be applied over the metal layer. Protective layers include an adhesive layer and transparent organic cover sheet (col 6, line 43). Alternatively, a combination of soft polymeric and hard polymer layers may be applied as the protective layer.

Andriessen does not teach that the binder should comprise a N-quaternized cellulose. However, Ricoh teaches a heat sensitive recording sheets that comprises a binder comprising an ammonium salt and CMC or methyl cellulose (abstract). Said

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binder improves water resistance (abstract). Therefore, it would have been obvious to one of ordinary skill in the art to utilize the binder taught in Ricoh as the binder utilized in the heat mode recording material taught in Andriessen in order to improve the recording material's water resistance.

3. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andriessen et al. (US 6,187,508B1) or EP0875889A1 (Daems) in view of JP 58089397A (aka Ricoh), as applied above, and further in view of Takahashi et al. (US 4,405,706). Andriessen, Daems, and Ricoh fail to teach that Ni or alloys thereof may be utilized as the metal layer of the heat mode recording medium. However, Takahashi teaches that Ni and alloys thereof may be utilized in heat mode recording mediums (col 3, line 52+). Specifically, nickel may be alloyed with molybdenum, cobalt, or iron. Thus, it would have been obvious to one of ordinary skill in the art to utilize nickel or its alloys as the metal layer of the heat mode recording mediums taught in Andriessen and Daems because Takahashi teaches that Ni and its alloys are useful for metal layers in heat mode recording mediums.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 703-305-0025. The examiner can normally be reached on Monday-Friday from 7:30 a.m. to 4:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone

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number for the organization where this application or proceeding is assigned is 703-305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

K-RK

KRK

D. S. NAKARANI
D. S. NAKARANI
PRIMARY EXAMINER, Acting SPE